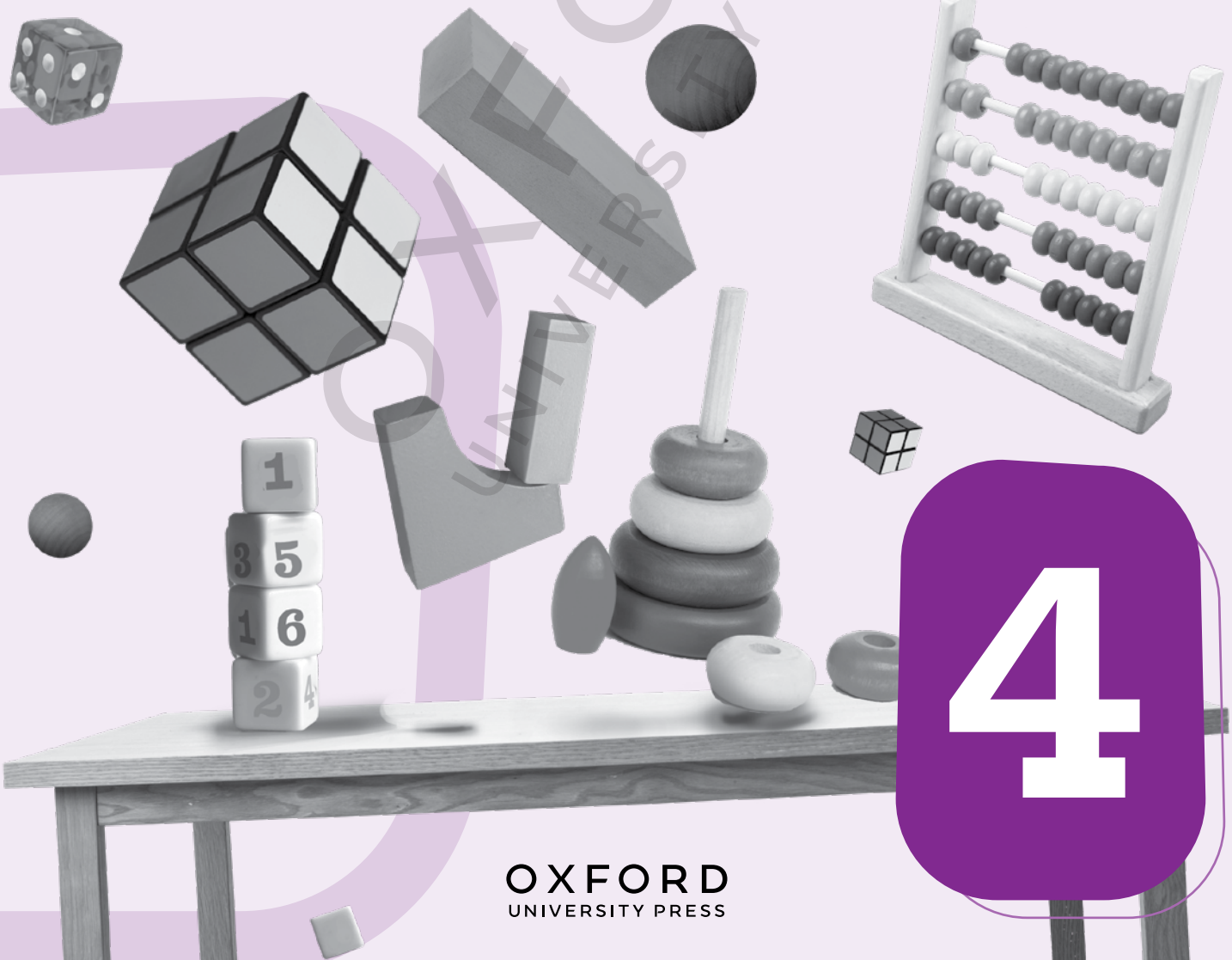
ASSESSMENT PRACTICE BOOK



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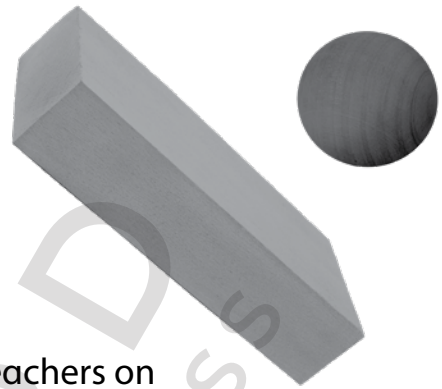
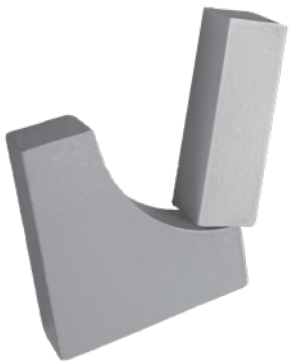
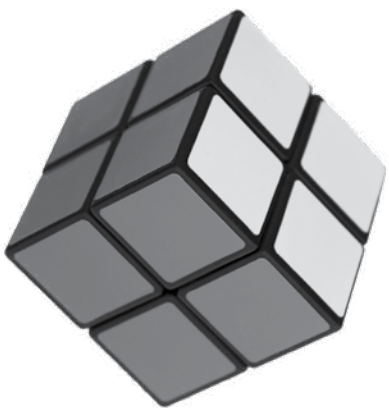


Introduction

The **Assessment Practice Book** directs the teachers on how to effectively make use of assessments in their classrooms. The Assessment Practice Book covers components of formative assessments, such as class tests, worksheets, homework, and quizzes. The teachers and students focus on common learning goals and work towards achieving them together.



The worksheets enhance an understanding of students' learning in many ways, and challenges them to approach and decipher the same concepts from different angles. The students also benefit from different types of assessments, as each type offers the student comprehensive feedback that will eventually guide them towards successfully arriving at their learning objectives.



Contents

1.1 Whole Numbers

- **i.** Identify place values of digits up to one hundred thousand (100,000).
- **ii.** Read numbers up to one hundred thousand (100,000).
- **iii.** Write numbers up to one hundred thousand (100,000).
- **iv.** Write numbers in words up to one hundred thousand (100,000).
- **v.** Compare and order numbers up to 5- digits.

1. Write the place value of each underlined digit. The words given in the box will assist you.

ones	thousands	hundreds	tens	ten thousands

a) 1<u>9</u>409		**b)** <u>2</u>51643	
c) 10345<u>6</u>		**d)** 4732<u>9</u>	
e) 564<u>5</u>41		**f)** <u>1</u>00088	

2. Complete the expanded form.

a) 4378 =	4000 + ☐ + 70 + ☐
b) 92371 =	☐ + 2000 + 300 + ☐ + ☐
c) 192656 =	100000 + 90000 + ☐ + ☐ + ☐ + 6
d) 534877 =	☐ + ☐ + 4000 + ☐ + 70 + ☐

3. Write these numbers in words.

a) 37942	
b) 628807	
c) 420551	
d) 200368	
e) 573005	

4. Fill in the blanks with < or > to compare the given numbers.

a) 65356 ☐ 65358	**b)** 32567 ☐ 23578	**c)** 6538 ☐ 789
d) 90003 ☐ 89990	**e)** 182 ☐ 8276	**f)** 26734 ☐ 26834

5. Write these numbers in descending order. (from largest to smallest)

a)	7712	1772	2117	
b)	1345	14534	1036	
c)	22456	23678	21556	
d)	43256	34257	42357	

1.2 Addition

i. Add numbers up to 5-digits.

ii. Solve real life number stories involving addition of numbers up to 5-digits.

1. Add the following.

a)
$$\begin{array}{r} 78392 \\ +\ 12635 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 90243 \\ +\ 8735 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 10556 \\ +\ 80357 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 44321 \\ +\ 6748 \\ \hline \end{array}$$

2. Arrange the numbers vertically and solve.

a) 42352 + 67543	**b)** 24568 + 35312
c) 98756 + 50744	**d)** 72239 + 8245
e) 68534 + 531	**f)** 12236 + 8705

3. Solve the problems.

	Problems	Working
a)	86284 tourists visited a zoo in the months of June and July altogether. If 47876 of them visited in June how many tourists visited in July?	Answer: ☐ tourists
b)	Shoaib donates Rs 56780 to an orphanage for their education and Rs 46980 for their food. How much total amount does he donate?	Answer: Rs ☐
c)	Kanwal travelled 723672 km in one month. The next month she travelled 31716 km. How much did she travel in two months?	Answer: ☐ km
d)	A school library has 83764 books in Urdu and 932 books in other languages. How many books are there in the library?	Answer: ☐ books

1.3 Subtraction

i. Subtract numbers up to 5-digits.

ii. Solve real life situations involving subtraction of numbers up to 5-digits.

1. Subtract the following.

a)
$$\begin{array}{r} 43598 \\ -\ 26738 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 62607 \\ -\ 9058 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 53129 \\ -\ 45391 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 99012 \\ -\ 53849 \\ \hline \end{array}$$

2. Arrange the numbers vertically and solve.

a) 74638 – 33545	**b)** 85964 – 74544
c) 99754 – 68245	**d)** 64583 – 8245
e) 59004 – 57838	**f)** 11526 – 8705

3. Solve the problems.

	Problems	Working
a)	Saad has a bag of 67388 marbles. If she looses 29985 of them, how many are left?	Answer: ☐ marbles
b)	Javeria needs Rs 67500 to buy a new TV. If she has Rs 58450, how much more does she need?	Answer: Rs ☐
c)	Khurram has 62648 sheep. He sells 4627. How many sheep are left?	Answer: ☐ sheep
d)	In a reading competition, Tahir reads 73682 words and Moazzam reads 93637 words in a given time. How many more pages does Moazzam read than Tahir?	Answer: ☐ pages

1.4 Multiplication

i. Multiply numbers up to 4-digit by numbers up to 2-digit.

ii. Solve real life situations involving multiplication of numbers up to 4-digit by 2-digit.

1. Multiply the following.

a)
$$\begin{array}{r} 598 \\ \times\ 26 \\ \hline \end{array}$$

b)
$$\begin{array}{r} 6437 \\ \times\ 88 \\ \hline \end{array}$$

c)
$$\begin{array}{r} 1109 \\ \times\ 73 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 9572 \\ \times\ 34 \\ \hline \end{array}$$

2. Arrange the numbers vertically and solve.

a) 6048×53	**b)** 7973×67	**c)** 9020×50
d) 5390×68	**e)** 6086×80	**f)** 5941×99

3. Solve the problems.

	Problems	Working
a)	A factory produces 1084 foot balls in a day. How many will it produce in 25 days?	Answer: ☐ balls
b)	Mohib placed 24 hoops on the ground. In each hoop he put 738 toy cars. How many toy cars were in 24 hoops?	Answer: ☐ toy cars
c)	A school collects Rs 25 from each of its student for charity. If there are 1820 students in the school, how much total amount is collected?	Answer: Rs ☐
d)	Zubair saves Rs 8900 per month from his salary. How much does he save in 25 months?	Answer: Rs ☐

1.5 Division

i. Divide numbers up to 4-digit by numbers up to 2-digit.

ii. Solve real life situations involving division of numbers up to 4-digit by a number up to 2-digits.

1. Divide the following.

a) $42\overline{)6972}$ **b)** $88\overline{)1848}$ **c)** $35\overline{)1470}$ **d)** $79\overline{)9559}$

2. Solve the following.

a) 6125 ÷ 10	**b)** 7392 ÷ 32	**c)** 1200 ÷ 75
d) 9641 ÷ 31	**e)** 2788 ÷ 68	**f)** 3465 ÷ 55

3. Solve the problems.

	Problems	Working
a)	There were 3198 sheep to be shared equally into 39 paddocks. How many would there be in each paddock?	Answer: ☐ sheep
b)	Khursheed has 1998 metres of material to make curtains. He shares the material equally to his 54 tailors, how much does each receive?	Answer: ☐ m
c)	Sarah needs to pack 7550 oranges in boxes. If each box can contain 25 oranges how many such boxes are required to pack them?	Answer: ☐ boxes
d)	Miss Farah has 1560 pages of scrap paper. She wants to make scrap paper packets for her 26 students. How many pages does each packet have?	Answer: ☐ pages

1.5 Division

iii. Solve real life situations using appropriate operations of addition, subtraction, multiplication and division of numbers up to 2-digits.

1. Solve following real life problems using appropriate operations.

	Problems	Working
a)	A shopkeeper has 2150 boxes of 25 erasers each. How many erasers are there in all the boxes altogether?	Answer: ☐ erasers
b)	The cost of 32 buses is Rs 9920. What is the cost of one toy bus?	Answer: Rs ☐
c)	There are 20755 total students in schools of a town. If 9800 of them are girls, how many boys are there?	Answer: ☐ boys
d)	An NGO plants 21345 trees in one month and 30993 in another months. How many total trees does it plant in both the months?	Answer: ☐ trees
e)	Zaib buys 4 cup-cakes and Nuzhat buys 7 pan cakes from a bakery. The cost of one cup cake is Rs 120 and the cost of one pan cake is Rs 110. How much do Zaib and Nuzhat spend altogether?	Cost of 4 cup cakes: Rs ☐ Cost of 7 cup cakes: Rs ☐ Answer: ☐ pages

1.6 Number Patterns

- **i.** Recognize a given increasing and decreasing pattern by stating a pattern rule.
- **ii.** Describe the pattern found in a given table or chart
- **iii.** Complete the given increasing and decreasing number sequence

1. Write rules for each increasing and decreasing pattern.

Pattern	Rule
a) 0, 3, 6, 9, 12, ...	
b) 100, 95, 90, 85, ...	
c) 24, 26, 28, 30, ...	
d) 150, 200, 250, 300, ...	
e) 9000, 8000, 7000, 6000, ...	

2. Complete the following patterns.

a)	56, 53, 50, ☐, 44
b)	110, ☐, 130, 140, 150, ☐
c)	☐, 19, 15, 11, ☐, 3
d)	4, ☐, 24, 34, 44

3. Follow the rule and write down the first three terms of the pattern.

Rule	Pattern
a) Start with 7 and add 10.	
b) Start with 12 and add 2.	
c) Start with 55 and subtract 5.	
d) Start with 93 and subtract 3.	
e) Start with 130 and subtract 10.	

4. Make your own rule and write down the first three terms using your rule.

My Rule is: ☐

Pattern is: ☐, ☐, ☐

2.1 Divisibility Tests

i. Identify divisibility rules for 2, 3, 5, and 10.

ii. Use divisibility tests for 2, 3,5 and 10 on numbers up to 5 digits.

2.2 Prime and composite numbers

i. Identify and differentiate 2-digit prime and composite numbers

1. Which of the following numbers are divisible by 3? Circle the numbers.

a) 5832	**b)** 133	**c)** 417	**d)** 20004	**e)** 332

2. Circle all the numbers that are not divisible by 5?

552 6785 76480 1183
790 1389 70
6637 95 55556 3865

3. Underline the numbers which are divisible by 2, circle the numbers that are divisible by 10 and then fill in the given box.

152 830 78 2225
777 76331 2676
2570 6003 214 647
13130 3876 888

Numbers divisible by both 2 and 10

4.

What is the only one even prime number?	

5.

Find any two prime numbers between 30 and 45.	

6.

List down all the factors of 88.	

7.

List down first 3multiples of 25.	

8.

Write all composite numbers between 75 and 84.	

2.3 Factors and multiples

- **i.** Find factors of a number up to 50.
- **ii.** List the first ten multiples of a 1-digit number.
- **iii.** Differentiate between factors and multiples

2.4 Prime Factorization

- **i.** Factorize a number by using prime factors.
- **ii.** Determine common factors of two or more 2-digit numbers.
- **iii.** Determine common multiples of two or more 2-digit numbers.

1. List down the factors of each number.

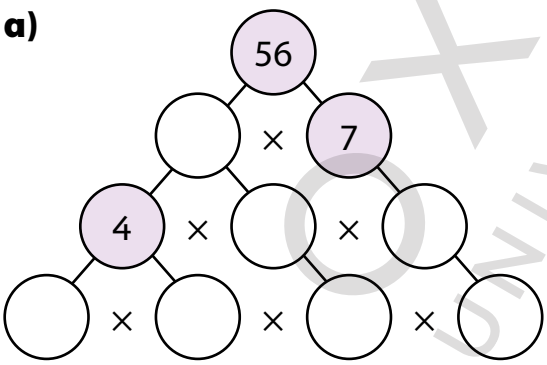
a) 16		**b)** 32	
c) 24		**d)** 49	
e) 25		**f)** 42	

2. Write first four multiples of each number.

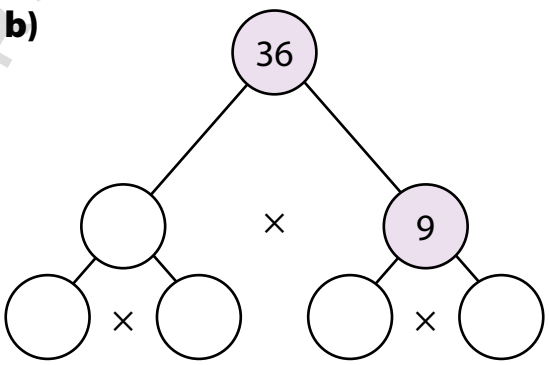
a) 8		**b)** 6	
c) 4		**d)** 9	

3. Complete the following factor trees to show the prime factors of these numbers.

a)



b)



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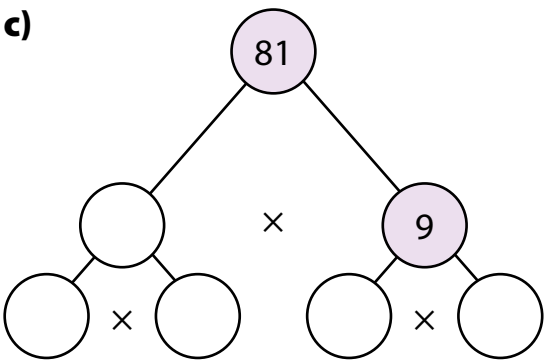
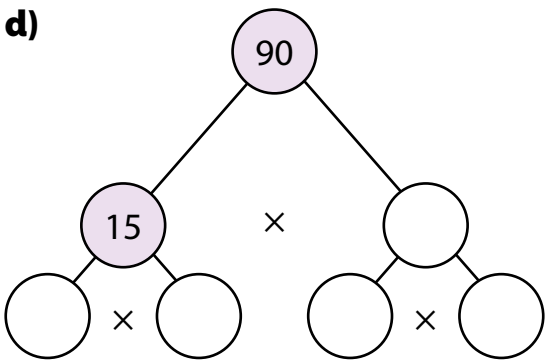


d)



4. Find out the prime factors.

a)

2	36

b)

	30

c)

	44

5. Find first 3 common multiples of the following set of numbers.

	Numbers	3 Common Multiples
a)	12 and 14	
b)	10, 12, and 15	

	Numbers	3 Common Multiples
c)	4 and 6	
d)	3, 6, and 12	

6. Find common factors of the following.

	Working	Common factors
a) 26 and 78		
b) 16 and 24		
c) 13 and 39		
d) 7, 21, and 28		
e) 32, 48, and 56		

3.1 Fractions

i. Recognize like and unlike fractions.

ii. Compare two unlike fractions by converting them to equivalent fractions with the same denominator.

iii. Simplify fractions to the lowest form

3.2 Types of Fractions

i. Identify (unit, proper, improper) fractions and mixed numbers.

1. Match the following.

a) $\frac{1}{3}, \frac{1}{26}, \frac{1}{100}$	mixed numbers
b) $\frac{8}{3}, \frac{35}{6}, \frac{78}{10}$	like fractions
c) $4\frac{1}{3}, 2\frac{1}{26}, 5\frac{1}{100}$	unit fractions
d) $\frac{5}{18}, \frac{2}{18}, \frac{7}{18}$	improper fractions

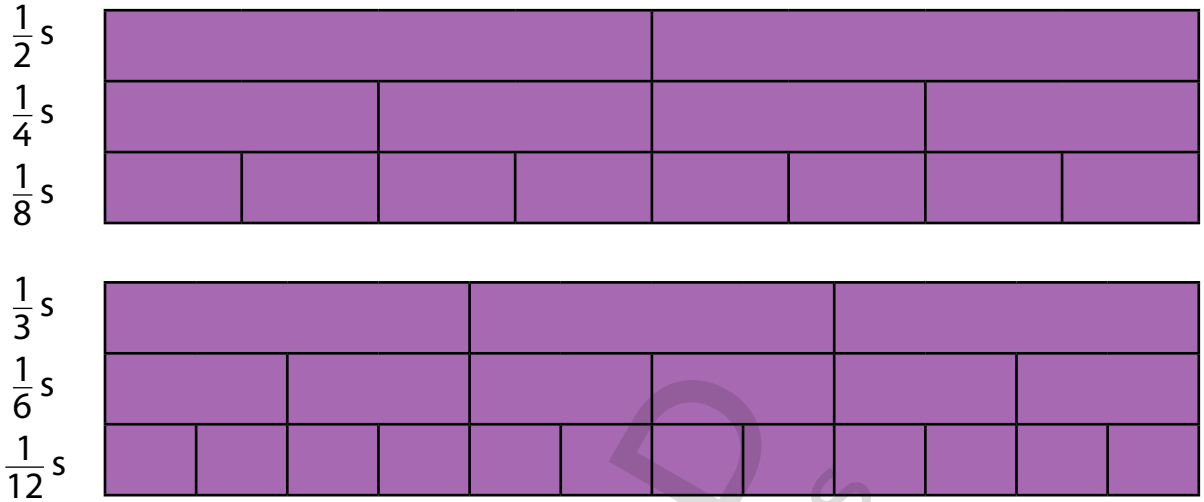
2. Compare the given fractions and fill in the blanks with < or >.

a) $\frac{2}{5} \square \frac{3}{10}$	**b)** $\frac{3}{4} \square \frac{5}{6}$	**c)** $\frac{11}{12} \square \frac{9}{10}$
d) $\frac{7}{14} \square \frac{12}{28}$	**e)** $\frac{15}{24} \square \frac{7}{12}$	**f)** $\frac{1}{3} \square \frac{5}{9}$

3. Reduce the following to the simplest/lowest term.

a) $\frac{16}{20} \rightarrow \frac{\square}{\square}$	**b)** $\frac{28}{40} \rightarrow \frac{\square}{\square}$	**c)** $\frac{60}{84} \rightarrow \frac{\square}{\square}$
d) $\frac{15}{64} \rightarrow \frac{\square}{\square}$	**e)** $\frac{25}{100} \rightarrow \frac{\square}{\square}$	**f)** $\frac{12}{144} \rightarrow \frac{\square}{\square}$

3. Use the fraction walls below to answer true or false.



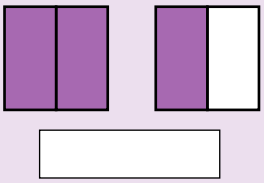
a) $\frac{1}{2} < \frac{1}{4}$ ☐	**b)** $\frac{1}{3} > \frac{1}{6}$ ☐
c) $\frac{1}{4} = \frac{3}{8}$ ☐	**d)** $\frac{1}{6} < \frac{3}{12}$ ☐
e) $\frac{2}{5} > \frac{3}{10}$ ☐	**f)** $\frac{2}{5} = \frac{4}{10}$ ☐
g) $\frac{3}{8} > \frac{1}{4}$ ☐	**h)** $\frac{10}{12} > \frac{5}{6}$ ☐
i) $\frac{7}{8} < \frac{3}{4}$ ☐	**j)** $\frac{6}{12} = \frac{1}{3}$ ☐

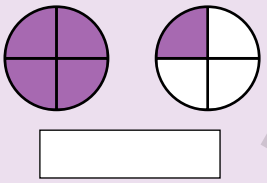
3.2 Types of Fractions

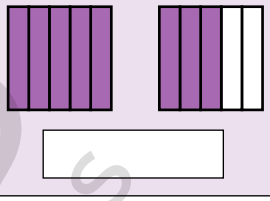
ii. Convert improper fractions to mixed numbers and vice versa

iii. Arrange fractions in ascending and descending order.

1. Label the mixed numbers below.

a) 

b) 

c) 

2. Write the following as mixed numbers.

	Improper Fractions	Mixed Number
a)	$\frac{14}{3}$	
c)	$\frac{35}{4}$	
e)	$\frac{51}{9}$	

	Improper Fractions	Mixed Number
b)	$\frac{76}{12}$	
d)	$\frac{40}{6}$	
f)	$\frac{11}{5}$	

3. Write the following as improper fractions.

	Mixed Number	Improper Fractions
a)	$6\frac{3}{5}$	
c)	$5\frac{6}{8}$	
e)	$9\frac{2}{6}$	

	Mixed Number	Improper Fractions
b)	$5\frac{2}{9}$	
d)	$3\frac{4}{7}$	
f)	$4\frac{8}{9}$	

4. Make the denominators of given fractions same and then arrange them in ascending order. (from smallest to largest).

Fractions			Fractions with same denominators			Ascending order
$\frac{3}{7}$	$\frac{9}{14}$	$\frac{1}{2}$				
$\frac{11}{16}$	$\frac{5}{8}$	$\frac{3}{4}$				

3.3 Addition and Subtraction of fractions

i. Add fractions with like denominators

ii. Subtract fractions with like denominators

3.4 Multiplication of fractions

i. Multiply a fraction and mixed number by a whole number

ii. Multiply two fractions and mixed numbers

3.5 Division of fractions

i. Divide a fraction and mixed number by a whole number

ii. Analyse real-life situations involving fractions by identifying appropriate number operations

1. Add these fractions.

a) $\frac{4}{9}+\frac{3}{9}=$ ___	**b)** $\frac{7}{12}+\frac{2}{12}=$ ___	**c)** $\frac{5}{11}+\frac{5}{11}=$ ___
d) $\frac{4}{18}+\frac{5}{18}=$ ___	**e)** $\frac{11}{21}+\frac{17}{21}=$ ___	**f)** $\frac{19}{55}+\frac{24}{55}=$ ___

2. Subtract the following fractions.

a) $\frac{12}{15}-\frac{14}{15}=$ ___	**b)** $\frac{8}{9}-\frac{4}{9}=$ ___	**c)** $\frac{10}{11}-\frac{2}{11}=$ ___
d) $\frac{18}{20}-\frac{9}{20}=$ ___	**e)** $\frac{22}{35}-\frac{9}{35}=$ ___	**f)** $\frac{79}{80}-\frac{47}{80}=$ ___

3. Add the fractions to produce an improper fraction, then change it into a mixed numeral.

Addition	Improper Fractions	Mixed Number
a) $\frac{5}{8}+\frac{6}{8}$		
c) $\frac{3}{5}+\frac{7}{5}$		
e) $\frac{11}{12}+\frac{5}{12}$		

Addition	Improper Fractions	Mixed Number
b) $\frac{7}{12}+\frac{8}{12}$		
d) $\frac{9}{10}+\frac{4}{10}$		
f) $\frac{11}{12}+\frac{2}{12}$		

4. Solve the following and then simplify the fraction to the lowest form.

Multiplication	Solution	Lowest form
a) $\frac{5}{8}\times 2$		
b) $2\frac{5}{4}\times 5$		
c) $\frac{3}{20}\times 4$		
d) $\frac{4}{12}\times 7$		

e) $20\frac{3}{7} \times 3$		
f) $\frac{9}{10} \times \frac{5}{6}$		
g) $3\frac{3}{7} \times 2\frac{6}{2}$		
h) $5\frac{3}{7} \times 4\frac{6}{2}$		

5. Divide.

a) $\frac{49}{4} \div 7 =$ ____	**b)** $2\frac{4}{5} \div 4 =$ ____	**c)** $\frac{5}{8} \div 15 =$ ____
d) $\frac{23}{5} \div 23 =$ ____	**e)** $\frac{18}{24} \div 3 =$ ____	**f)** $5\frac{7}{9} \div 35 =$ ____

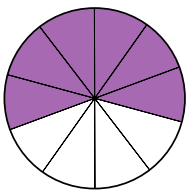
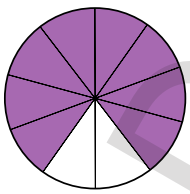
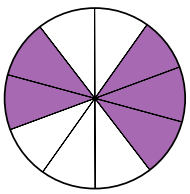
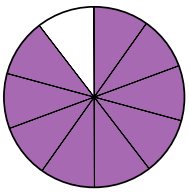
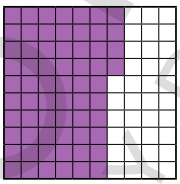
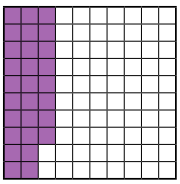
6. Solve the following problems.

	Problems	Working
a)	Maheen had $\frac{3}{12}$ of a cake. Shuja had $\frac{7}{12}$ of a similar cake. How much cakes did they have altogether?	Answer: ____ cake
b)	Ali took $\frac{3}{8}$ of a plate of biryani, and gave $\frac{1}{3}$ to his friend. What fraction of the biryani is still left?	Answer: ____
c)	Umair takes $\frac{3}{4}$ hours to complete a painting. How long does he take to paint $\frac{1}{6}$ of the painting?	Answer: ____ hours
d)	Sumera cuts a $\frac{9}{10}$ m long rope into 3 equal pieces. What is the length of each piece?	Answer: ____ m
e)	Qadir spent $\frac{4}{5}$ of Rs 360 on fast food. How much did he spend?	Answer: Rs ____

4.1 Decimals

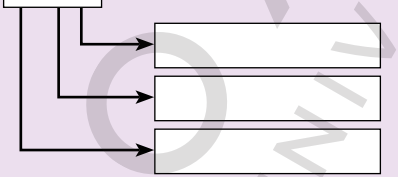
i. Recognize a decimal number as an alternative way of writing a fraction.
ii. Express a decimal number as a fraction whose denominator is 10, 100 or 1000.
iii. Identify and recognize the place value of a digit in decimals (up to 3-decimal places).

1. Write a fraction and decimal for each shaded region. The first one has been done for you.

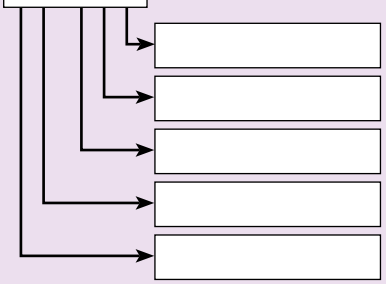
a) 	**b)** 	**c)** 
decimal: 0.6	decimal:	decimal:
fraction: $\frac{6}{10}$	fraction:	fraction:
d) 	**e)** 	**f)** 
decimal:	decimal:	decimal:
fraction:	fraction:	fraction:

2. Write the place value of the following.

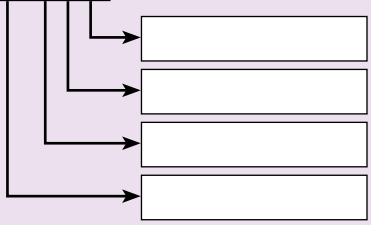
a) 6.02



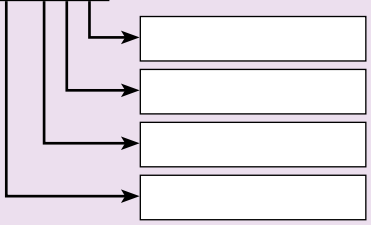
b) 52.346



c) 8.273



d) 3.539



3. Shade the box with correct place value of the underlined digits.

a) 32.3<u>2</u>7	tenths	hundredths	thousandths
b) 86.20<u>5</u>	tenths	hundredths	thousandths
c) 64.<u>3</u>9	tenths	hundredths	thousandths
d) 1.<u>7</u>34	tenths	hundredths	thousandths
e) 5.00<u>4</u>	tenths	hundredths	thousandths

4. Solve the riddles. Select the numbers from the given number bank.

54.259	46.879	6.86	7.83	8.48

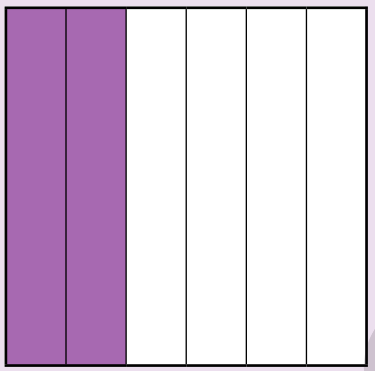
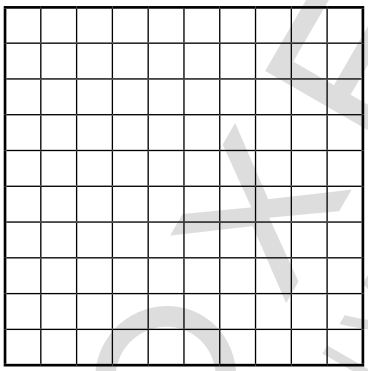
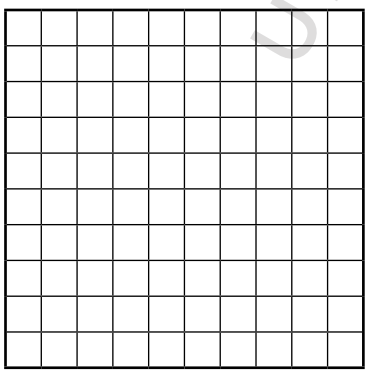
	Riddle	
a)	I am a 3 digit number. My ones digit is an odd number. My tenth digit is greater than my hundredth digit. Who am I?	Tens | Ones | • | Tenths | Hundredths | Thousandths
b)	I am a number. I have 5 at my tens place. My ones digit is an even number. My thousandth digit is greatest among all 4 digits. Who am I?	
c)	I am a 3 digit number. I am between 4.24 and 7.24. My ones and hundredth digits are same. Who am I?	
d)	I am a 5 digit number. My thousandths digit is a multiple of 3. My tenths digit is twice my tens digit My hundredths digit is not a composite number.	

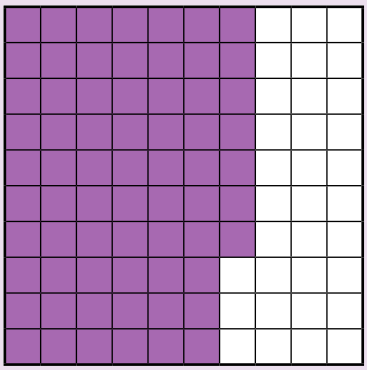
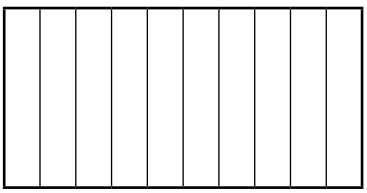
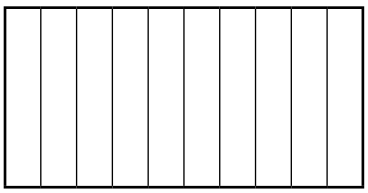
4.2 Conversion between fractions and decimal numbers

i. Convert a given fraction to a decimal if
- Denominator of the fraction is 10, 100 or 1000.
- Denominator of the fraction is not 10, 100 or 1000 but can be converted to 10,100 or 1000.

ii. Convert a decimal (up to 3-decimal places) to fraction.

1. Complete the following table.

Picture	Fraction	Decimal
a) 		
b) 	$\frac{75}{100}$	
c) 		0.38

d) 		
e) 	$\frac{9}{10}$	
f) 		0.3

2. Convert the following into decimal numbers.

a) $\frac{65}{10}$ →	**b)** $\frac{7635}{1000}$ →
c) $\frac{3518}{100}$ →	**d)** $\frac{280}{100}$ →
e) $\frac{8}{1000}$ →	**f)** $\frac{379}{10}$ →

3. Convert the following into decimal numbers.

	Equivalent fraction	Decimal Number
a) $\frac{2}{5}$	$\frac{\quad}{10}$	
c) $\frac{1}{2}$	$\frac{\quad}{10}$	
e) $\frac{4}{25}$	$\frac{\quad}{100}$	

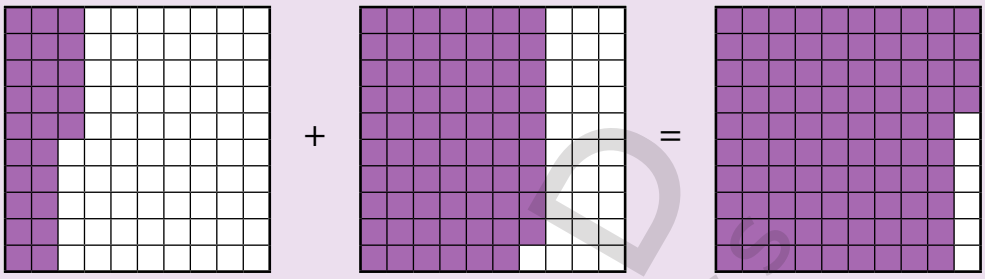
	Equivalent fraction	Decimal Number
b) $\frac{177}{20}$	$\frac{\quad}{100}$	
d) $\frac{457}{250}$	$\frac{\quad}{1000}$	
f) $\frac{85}{200}$	$\frac{\quad}{1000}$	

4.3 Basic operations on decimals numbers

i. Add and subtract 3-digit numbers (up to 2 decimal places).

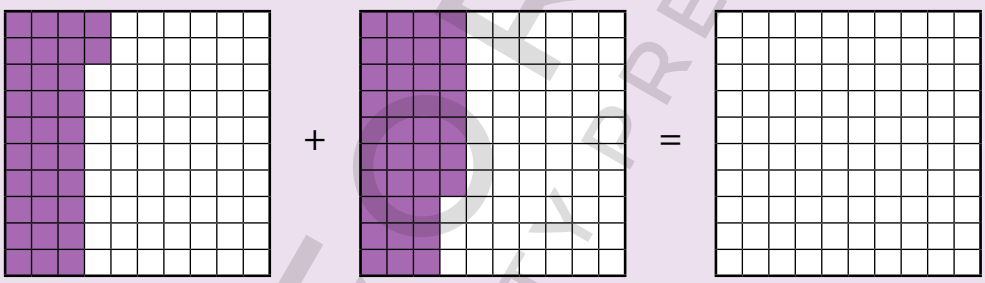
1. Write decimal for each shaded part and add both. Give your answer in decimal and shade the region.

a)



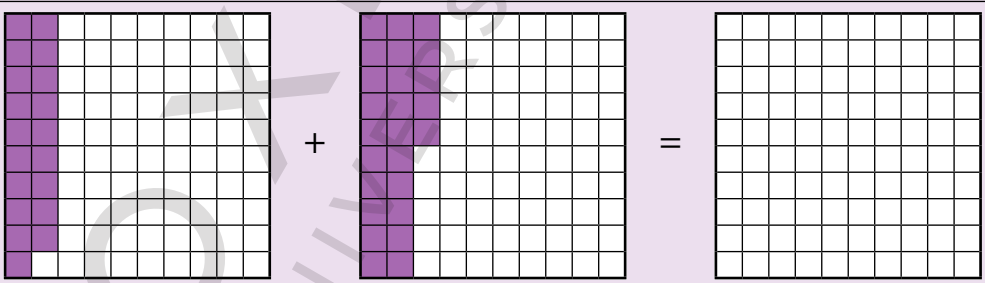
0.25 + 0.69 = 0.94

b)



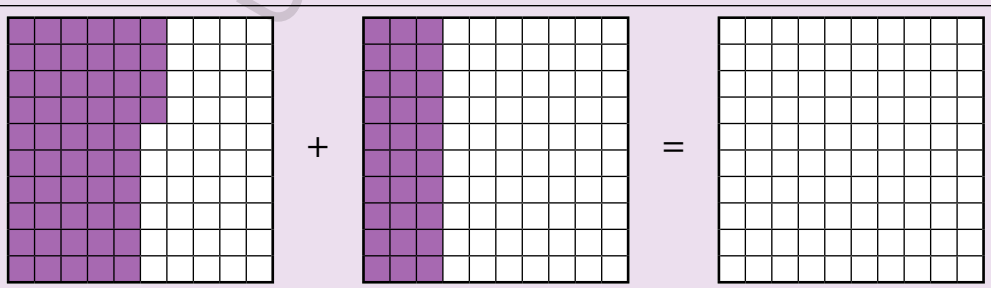
____ + ____ = ____

c)



____ + ____ = ____

d)



____ + ____ = ____

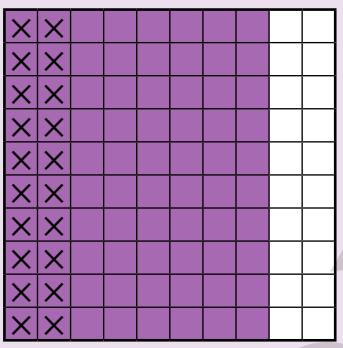
2. Add the following.

Line up the digits in such a way that decimal points come underneath one another.

a) 4.28 + 2.6	**b)** 6.53 + 3.67	**c)** 0.04 + 0.73
4 . 2 8 + 2 . 6 0 ☐		
d) 9.2 + 1.18	**e)** 15.4 + 9.68	**f)** 21.63 + 73.04

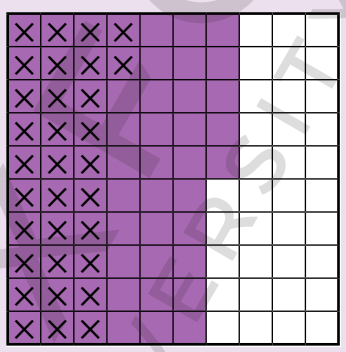
3. Write decimal for each shaded part and subtract. Give your answer in decimal.

a)



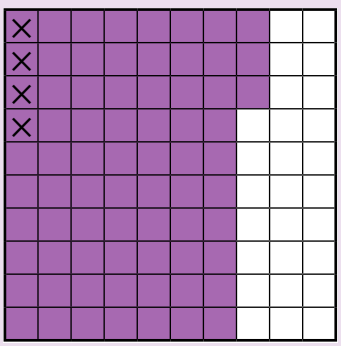
0.8 – 0.2 = 0.6

b)



☐ – ☐ = ☐

c)



☐ – ☐ = ☐

4. Solve the following.

a) 76.4 – 28.3	**b)** 9.44 – 6.37	**c)** 15.8 – 8.9
d) 0.8 – 0.04	**e)** 61.1 – 3.87	**f)** 17.5 – 16.6

4.3 Basic operations on decimals numbers

ii. Multiply a 2-digit number (up to 1 decimal place) by 10, 100, and 1000.
iii. Multiply a 2-digit number with 1 decimal placeby a 1-digit number.
iv. Divide a 2-digit number with 1 decimalplace by a 1-digit number
v. Solve real life situations involving 2-digit numbers with 1 decimal place using appropriate operations.

1. Solve the following.

a) 6.4×10	**b)** 8.1×100	**c)** 3.7×1000
d) 0.5×10	**e)** 0.2×100	**f)** 0.9×1000

2. Multiply.

a) 6.4×2	**b)** 7.8×3	**c)** 5.0×8
d) 0.3×9	**e)** 0.1×4	**f)** 2.5×5

3. Divide.

a) $7.4 \div 2$	**b)** $8.4 \div 4$	**c)** $3.6 \div 9$

d) 0.8 ÷ 8	**e)** 2.7 ÷ 3	**f)** 0.7 ÷ 7

4. Solve these problems.

	Problems	**Working**
a)	A two coloured ribbon is 9.8 cm long. 5.9 cm of the ribbon is blue and the remaining part is red in color. What is the length of red coloured part?	Answer: ☐ cm
b)	A leopard eats 4.5 kg of meat per day. How much will it eat in a week? (Hint: 7 days in a week)	Answer: ☐ kg
c)	Babar invites his 9 friends on iftar and prepares 3.6 *l* juice for them. If he distributes the juice equally among his friends how much juice will each get?	Answer: ☐ l
d)	Faria reads 1 page of an English reader in 1.3 minutes. How long she takes to read 10 pages?	Answer: ☐ minutes
e)	Zehra bought two pencils for Rs 4.6 and Rs 7.9 each. How much did she spend on the pencils?	Answer: Rs ☐
f)	Haris goes to a public library after his school. His school is 2.7 km from his home and public library is 0.8 km from his school. How much total distance he covers to reach the library?	Answer: ☐ km

4.4 Estimation

i. Round off a whole number to the nearest 10, 100, and 1000.

ii. Round off decimal (with 1 or 2 decimal places) to the nearest whole number.

1. Round off the following to the nearest 10.

a) 38 → ☐	**b)** 981 → ☐
c) 6177 → ☐	**d)** 4565 → ☐

2. Round off the following to the nearest 100.

a) 782 → ☐	**b)** 295 → ☐
c) 5324 → ☐	**d)** 1855 → ☐

3. Round off the following to the nearest 1000.

a) 6729 → ☐	**b)** 2487 → ☐
c) 8529 → ☐	**d)** 9045 → ☐

4. Round off the following decimal numbers to the nearest whole numbers.

a) 67.28 → ☐	**b)** 19.7 → ☐
c) 84.05 → ☐	**d)** 326.56 → ☐

5. Tick the correct option(s) for each rounded number given in column B. (There can be multiple correct options)

	A	B	Rounded off to the nearest 10	Rounded off to the nearest 100	Rounded off to the nearest 1000
a)	8263	8300			
b)	1029	1000			
c)	6635	6640			
d)	7409	7410			
e)	2101	2100			
f)	8546	9000			

5.1 Length

i. Use standard metric units to measure the length of different objects.

ii. Convert larger to smaller metric units (2-digits numbers with one decimal place)

- kilometers into meters
- meters into centimeters
- centimeters into millimeters

iii. Add and subtract measures of length in same units

1. Which measuring unit would you use to measure:

a) the thickness of your math book? (cm, m, km)

b) the distance from Karachi to Islamabad? (mm, cm, km)

c) the width of a needle? (mm, m, km)

d) the height of a door? (mm, c, km)

2. Add the following.

a) 6 km 15 m + 91 km	**b)** 78.25 m + 92.27 m
c) 0.358 cm + 17.03 cm	**d)** 72 cm 1 mm + 10 cm 7 mm
e) 21 m 16 cm + 20 m	**f)** 27.65 km + 0.09 km

3. Subtract the following.

a) 93572 km - 8329 km	**b)** 58.65 m - 2.38 m
c) 53 km 47 m – 5 km 20 m	**d)** 35 cm 5 mm – 25 cm 1 mm
e) 35.08 cm - 28.25 cm	**f)** 74 m 122 cm – 13 m

4. Convert the following as required.

a) 50 km = ☐ m	**b)** 250 cm = ☐ mm
c) 723 m = ☐ cm	**d)** 6.5 cm = ☐ mm
e) 4.4 m = ☐ cm	**f)** 60 m 78 cm = ☐ cm
g) 45 cm 4 mm = ☐ mm	**h)** 67 km 820 m = ☐ m

5.2 Mass

i. Use standard metric units to measure the mass of different objects.

ii. Convert larger to smaller metric units (2-digits numbers with one decimal place)

- Kilograms into grams
- Grams into milligrams

iii. Add and subtract measures of mass in same units

1. Which measuring unit would you use to measure:

a) the mass of a sack of rice? (mg, g, kg)

b) the mass of a small feather? (mg, g, kg)

c) the mass of your friend? (mg, g, kg)

d) the mass of small pack of chips? (mg, g, kg

2. Add the following.

a) 43 kg + 32792 kg	**b)** 78.25 g + 92.27 g
c) 0.38 mg + 17.03 mg	**d)** 61 g 4 mg + 14 g 630 mg
e) 53 kg 122 g + 98 g	**f)** 27 g 16 mg + 60 g 14 mg

3. Subtract the following.

a) 93572 kg - 8329 kg	**b)** 58.65 mg - 2.38 mg
c) 50.66 g - 45.08 g	**d)** 58 g 500 mg – 27 g 300 mg
e) 35 kg 762 g - 435 g	**f)** 88 kg 458 g – 29 kg 402 g

4. Convert the following as required.

a) 738 kg = ☐ g	**b)** 6.9 g = ☐ mg
c) 23 g = ☐ mg	**d)** 32 kg 167 g = ☐ g
e) 63 g 778 mg = ☐ mg	**f)** 2.7 kg = ☐ g
g) 15 kg 185 g = ☐ g	**h)** 5.5 g = ☐ mg

5.3 Capacity

i. Use standard metric units to measure the capacity of different containers.

ii. Convert larger to smaller metric units (2-digit numbers with one decimal place) liters into milliliters

iii. Add and subtract measure of capacity in same units

1. Which measuring unit would you use to measure:

a) the capacity of a tea spoon? (ml, l)

b) the capacity of a water tank? (ml, l)

c) the capacity of a car's petrol tank? (ml, l)

d) the capacity of a glass of water? (ml, l)

2. Add the following.

a) 483 *l* + 2792 *l*	**b)** 78.25 *l* + 92.27 *l*
c) 0.315 ml + 15.05 ml	**d)** 34 *l* 400 ml + 612 *l* 387 ml
e) 853 ml + 62 *l* 25 ml	**f)** 89 *l* + 32 *l* 45 ml

3. Subtract the following.

a) 579 *l* - 359 *l*	**b)** 4.6 *l* - 2.3 *l*
c) 8.9 ml – 5 ml	**d)** 78 *l* 128 ml – 54 *l* 87 ml
e) 94 *l* 543 ml - 17 *l*	**f)** 291 ml – 29 ml

4. Convert the following as required.

a) 48 *l* = ____ ml	**b)** 5.8 *l* = ____ ml
c) 16 *l* 217 ml = ____ ml	**d)** 512 *l* = ____ ml
e) 91 *l* 367 ml = ____ ml	**f)** 2.7 k*l* = ____ ml

5.3 Capacity

iv. Solve real-life situations involving conversion, addition and subtraction of measures of length, mass and capacity

1. Solve the following problems.

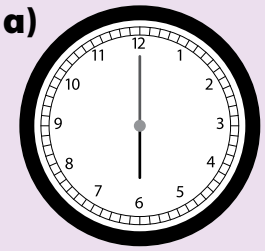
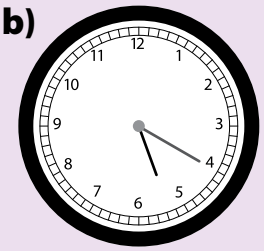
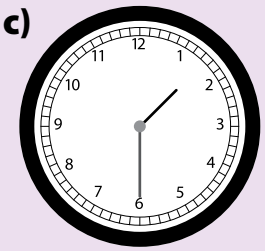
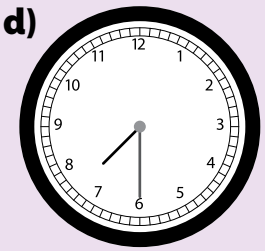
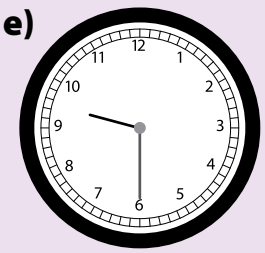
	Problem	Working
a)	K2 is the second highest peak in the world. Its height is 8 km 611 m. The height of Mount Everest is 8 km 848 m. Calculate the difference between their heights. Give your answer in metres.	Answer: ☐ m
b)	The mass of Sahil is 35 kg. Tariq's mass is 8 kg more than Sahil's mass. What is the mass of Tariq? Express the mass in grams.	Answer: ☐ g
c)	A filled water tanker delivered 5525 l water to a house. 4475 l is left in the tank. How much is the capacity of the water tanker?	Answer: ☐ l

d)	A pizza weighs 365 g. If 45 g of extra toppings are added to it what will be the new mass of the pizza?	Answer: ____ g
e)	A rectangular jogging track has a length of 15.5 m and breadth of 18.5 m. Find the total distance covered to complete the track once.	Answer: ____ m
f)	Zainab wants to make 3.56 l of an orange drink. She has 0.67 l of orange concentrate. How much water does she need to add to make the required amount of drink? Give your answer in terms of ml.	Answer: ____ ml
g)	Shazia had a 70 cm long ribbon. She cut 38.5 cm long ribbon from it. What is the length of the remaining part of the ribbon? Express your answer in terms of millimetres.	Answer: ____ mm

5.4 Time

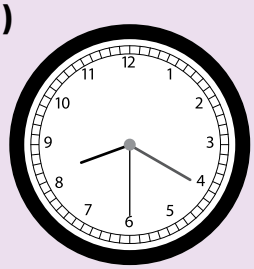
i. Read and write the time using digital and analogue clocks on 12-hour and 24-hour format.

1. Write the time in 12-hour and 24-hour format.

Clocks	12-hour format	24-hour format
a)  Sumbul wakes up.		
b)  Sumbul plays in a park.		
c)  Sumbul takes her lunch.		
d)  Sumbul eats her breakfast.		
e)  Sumbul goes to sleep.		

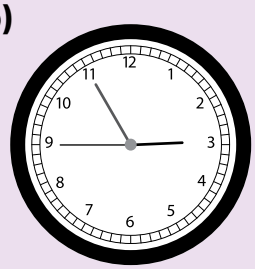
2. Look at the following clocks and write down the time in hours, minutes, and seconds.
The first one has been done for you.

a)

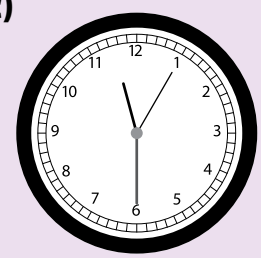


08:20:30

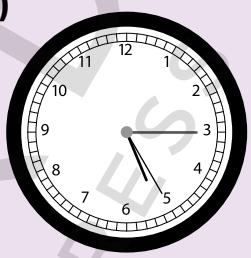
b)



c)



d)



5.4 Time

ii. Convert hours to minutes and minutes to seconds.

iii. Convert years to months, months to days, and weeks to days.

1. Convert the following as required.

a) 3 h = ☐ min	**b)** 150 min = ☐ sec
c) 15 h 20 min = ☐ min	**d)** 22 min 30 sec = ☐ sec
e) $\frac{3}{4}$ h = ☐ min	**f)** 18 h 40 min = ☐ min
g) $\frac{1}{3}$ min = ☐ sec	**h)** $2\frac{1}{2}$ h 10 min = ☐ min

2. Convert the following as required.

a) 5 years = ☐ months
b) 8 months = ☐ days
c) 12 weeks = ☐ days
d) 22 weeks 3 days = ☐ days
e) 16 years 3 months = ☐ months
f) 18 months 29 days = ☐ days
g) $\frac{1}{3}$ years = ☐ months
h) $2\frac{1}{2}$ months = ☐ days

5.4 Time

iv. Add and subtract measures of time without carrying and borrowing.

v. Solve simple real-life situations involving conversion, addition and subtraction of measures of time.

1. Add the following.

a)

	h	min	sec
	08	24	15
+	14	30	25

b)

	h	min	sec
	22	38	47
+	05	16	02

c)

	h	min	sec
	15	09	04
+	12	50	43

d)

	h	min	sec
	17	40	26
+	20	17	31

e)

	years	months	days
	4	08	15
+	3	02	11

f)

	years	months	days
	7	10	23
+	6	01	04

g)

	years	months	days
	12	11	09
+	10	00	17

h)

	years	months	days
	36	02	28
+	05	09	01

2. Subtract the following.

a)

	h	min	sec
	16	42	37
−	4	20	15

b)

	h	min	sec
	23	06	18
−	22	05	02

c)

	h	min	sec
	20	38	59
–	10	27	28

d)

	h	min	sec
	19	55	42
–	15	30	01

e)

	years	months	days
	7	11	25
–	5	08	21

f)

	years	months	days
	13	06	18
–	10	03	13

g)

	years	months	days
	12	10	27
–	10	06	17

h)

	years	months	days
	35	07	29
–	14	02	10

3. Solve the problems.

	Problem	Working
a)	A train left a station at 09 19 hrs and reached another station after 5 hours 25 minutes. What time was that?	Answer:
b)	Sarim arrived at the bus stop at 09: 15 am. He was late; the bus left 20 minutes before his arrival. At what time did the bus leave?	Answer:

c)	Mishaal went abroad for higher studies. She came back to her hometown after 4 years and 3 months. How many total months did she spend there?	Answer:
d)	A plumber worked for 5 hrs 30 minutes in the morning and 4 hrs 23 minutes later in the day. How long did he work in the whole day?	Answer:
e)	A movie started at 06:20 p.m. and ended at 08:35 p.m. What was the duration of the movie? Express you answer in minutes.	Answer:
f)	Humaira was 5 years 3 months when she joined school. Today she is 10 years 2 months. For how long has she been in school?	Answer:
g)	In an examination paper, the total time allowed was 2 hours 30 minutes. Maria completed first part of the paper after 1 hour 25 minutes. How much time is left for her to complete the paper?	Answer:

6.1 Lines

i. Recognize and identify parallel and non-parallel lines.

6.2 Angle

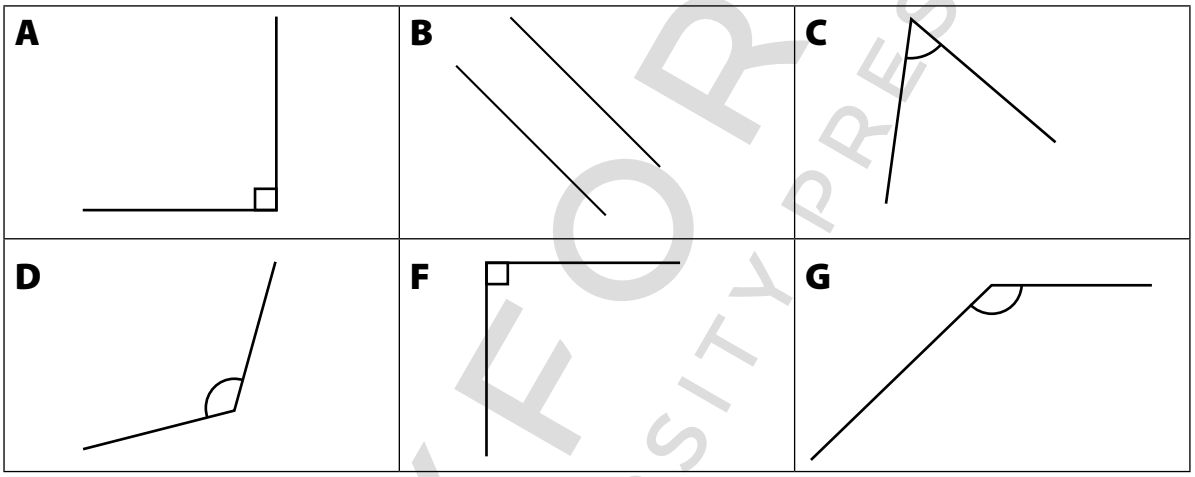
ii. Measure angles in degree (°) by using protractor.

iv. Differentiate acute, obtuse and right angles.

v. Measure angles using protractor where

- Upper scale of protractor reads the measure of angle from left to right.
- Lower scale of protractor reads the measure of angle from right to left.

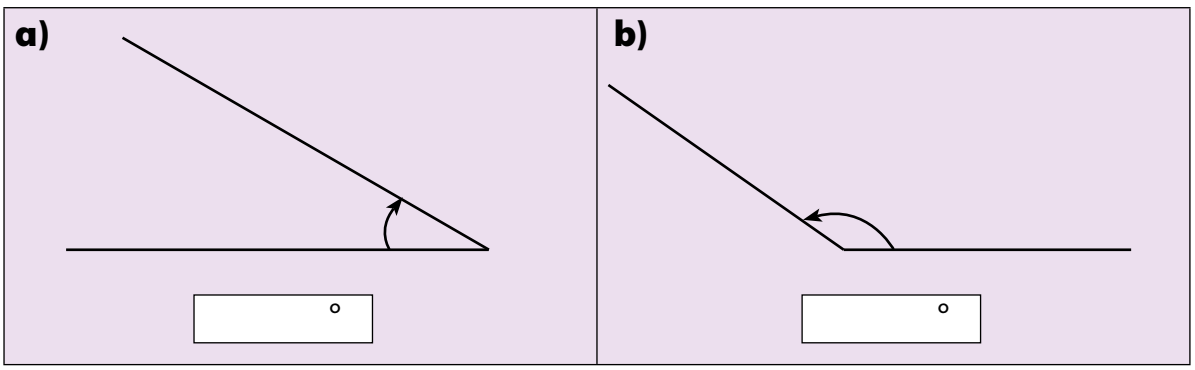
1. Look at the following boxes.



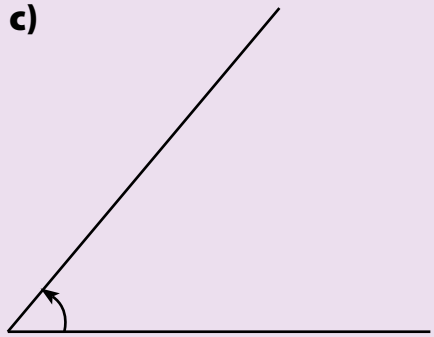
Answer the questions?

a) Which boxes contain right angles?	**b)** Which box contains parallel lines?
c) Which box contains acute angle?	**d)** Which boxes contain obtuse angles?

2. Measure these angles using protractor.



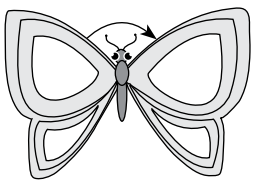
c)



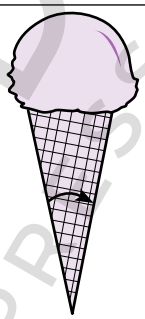
d)

3. Identify the marked angles as acute, obtuse and right angles.

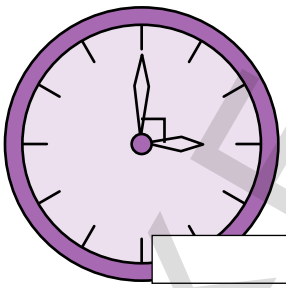
a)



b)

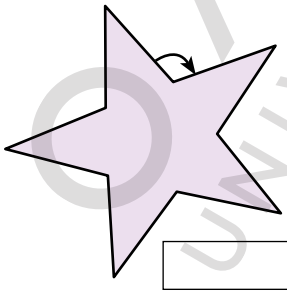


c)

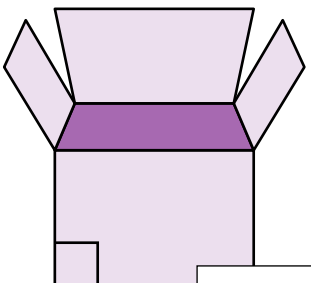


d)

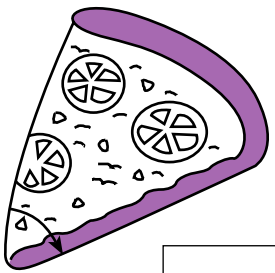
e)



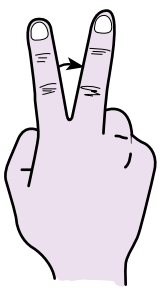
f)



g)



h)



6.2 Angle

iii. Draw an angle of given measurement and use the symbol (∠) to represent it.

iv. Differentiate acute, obtuse and right angles.

vi. Identify right angles in 2-D shapes

1. Use the base line to construct the angles using protractor.

a)

80°

b)

155°

c)

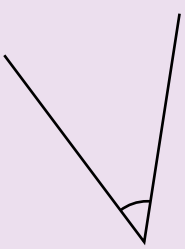
25°

d)

100°

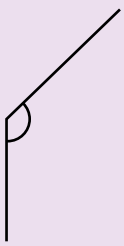
2. Classify these angles as acute, obtuse and right angle.

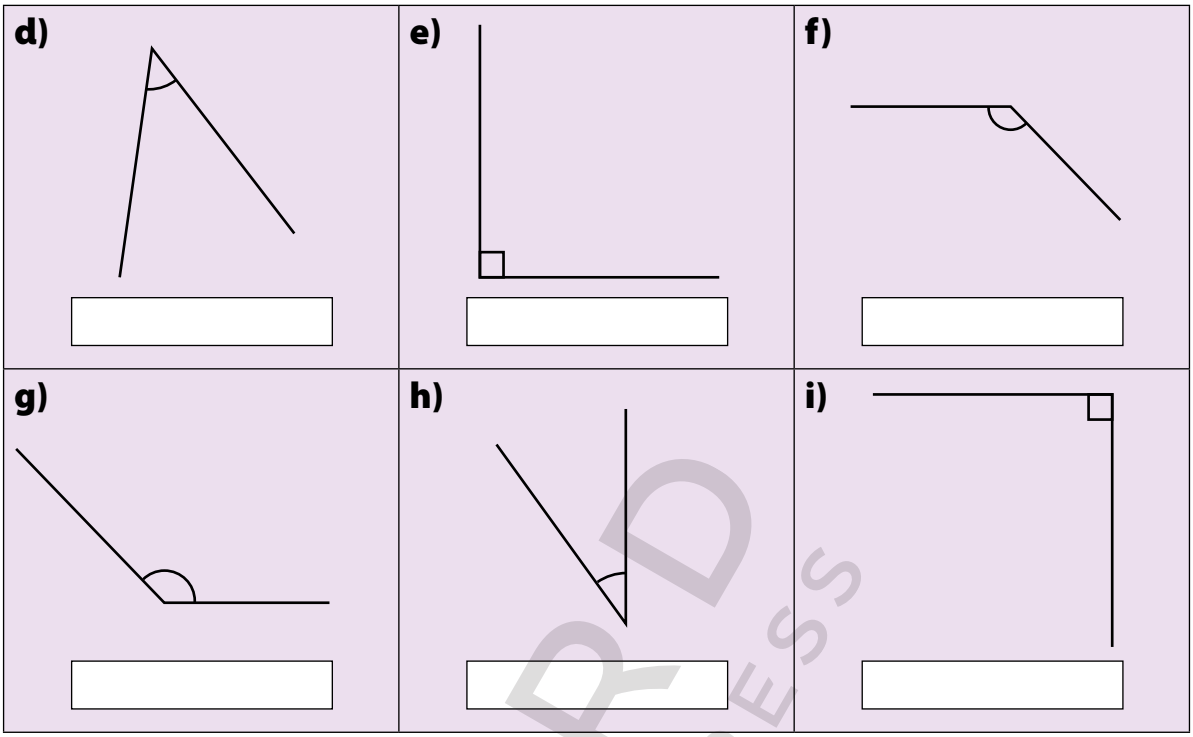
a)



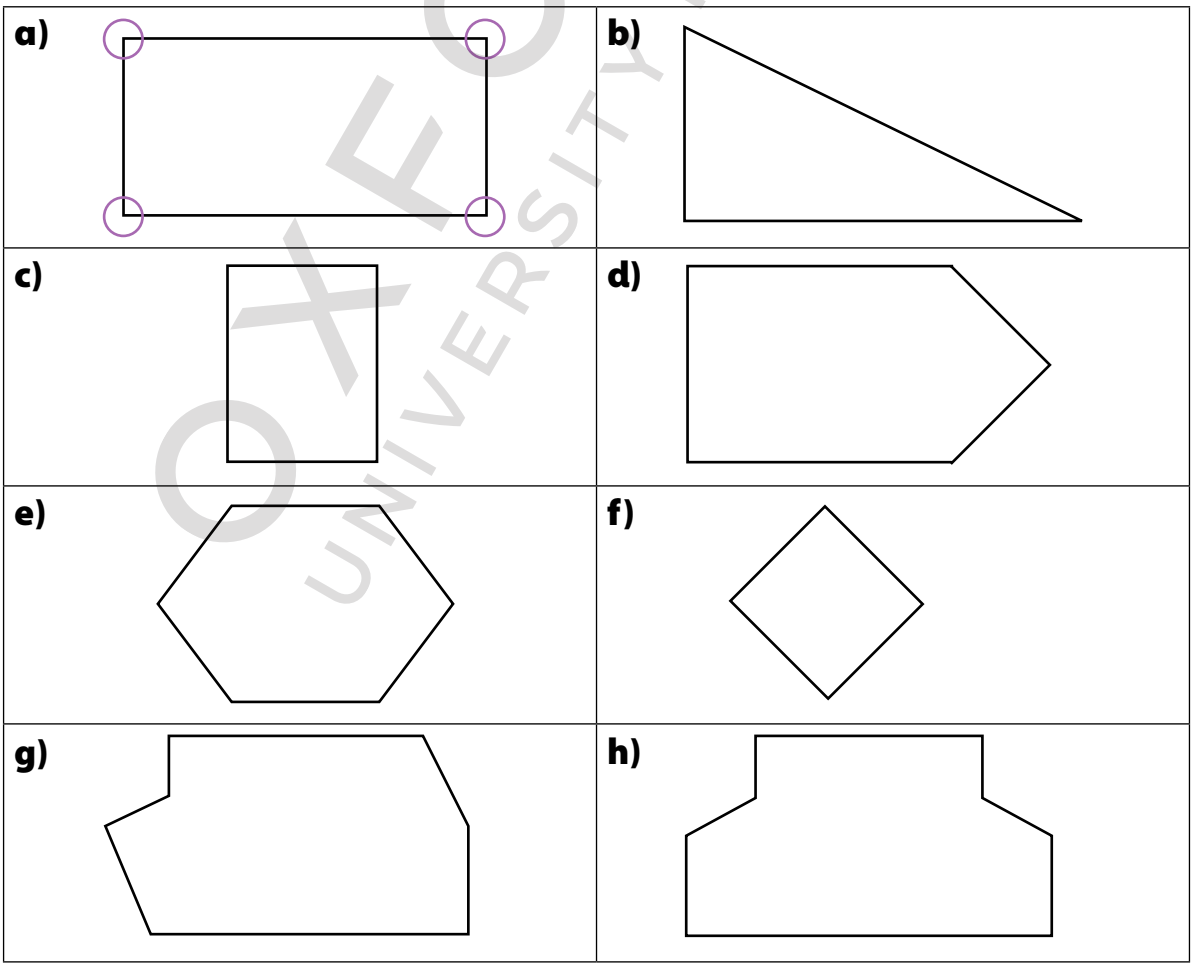
b)

c)





3. Here are some shapes. Draw a circle over all the right angles. The first one has been done for you.



6.3 Circle

i. Describe radius, diameter and circumference of a circle.

6.4 Perimeter and Area

i. Find perimeter of a 2-D figures ona square grid.

ii. Recognize that perimeter is measured in units of length.

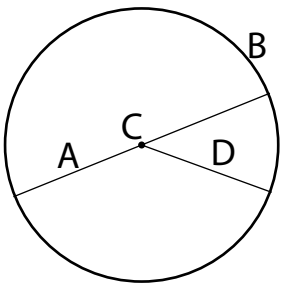
iii. Find area of 2-D figures on a square grid.

iv. Recognize that area of a square is measured in meter square (m^2)and centimeter square (cm^2)

1. Match the following.

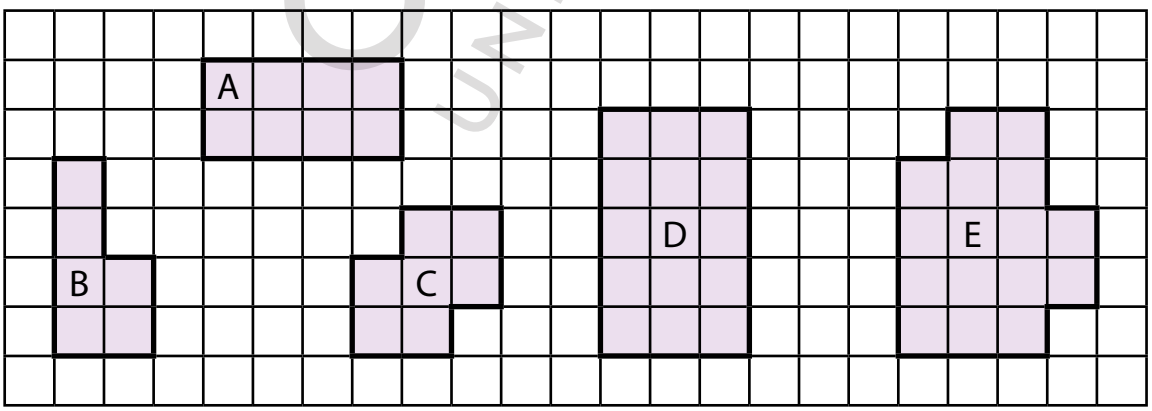
The length of a line from the centre of a circle to any point on its edge.	**Diameter**
Any straight line segment that passes through the centre of the circle and whose endpoints lie on the circle.	**Circumference**
The distance around a circle.	**Radius**

2. Write names of parts of the given circle using following letters.
[A, B, C, D]



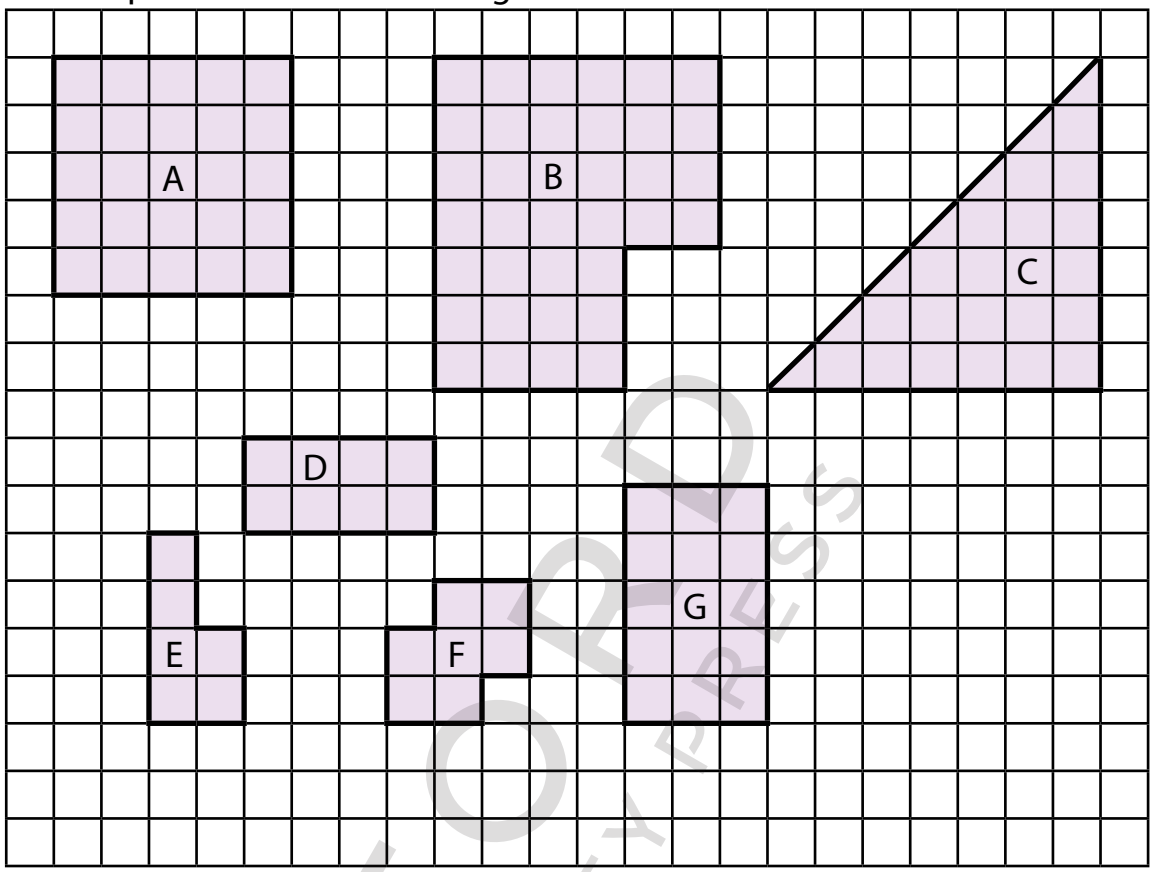
a) Centre: ☐	**b)** Radius: ☐
c) Diameter: ☐	**d)** Circumference: ☐

3. Calculate the perimeter of the following shapes in centimetres. The shapes are drawn on **1 cm grid**.



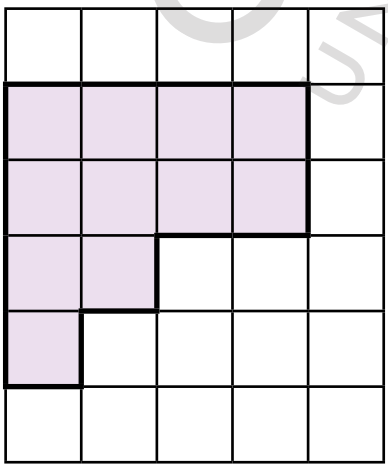
a) Shape A: ☐ cm	**b)** Shape B: ☐ cm	**c)** Shape C: ☐ cm
d) Shape D: ☐ cm	**e)** Shape E: ☐ cm	

4. Calculate the area of the following shapes in square centimetres (cm^2).
The shapes are drawn on 1 cm grid.



a) Shape A = ☐ cm^2	**b)** Shape B = ☐ cm^2
c) Shape C = ☐ cm^2	**d)** Shape D = ☐ cm^2
e) Shape E = ☐ cm^2	**f)** Shape F = ☐ cm^2
g) Shape G = ☐ cm^2	

5. Find out the perimeter and area of the following shape if it is drawn on **1 metre grid.** Choose the correct unit.



Perimeter = ☐ cm m

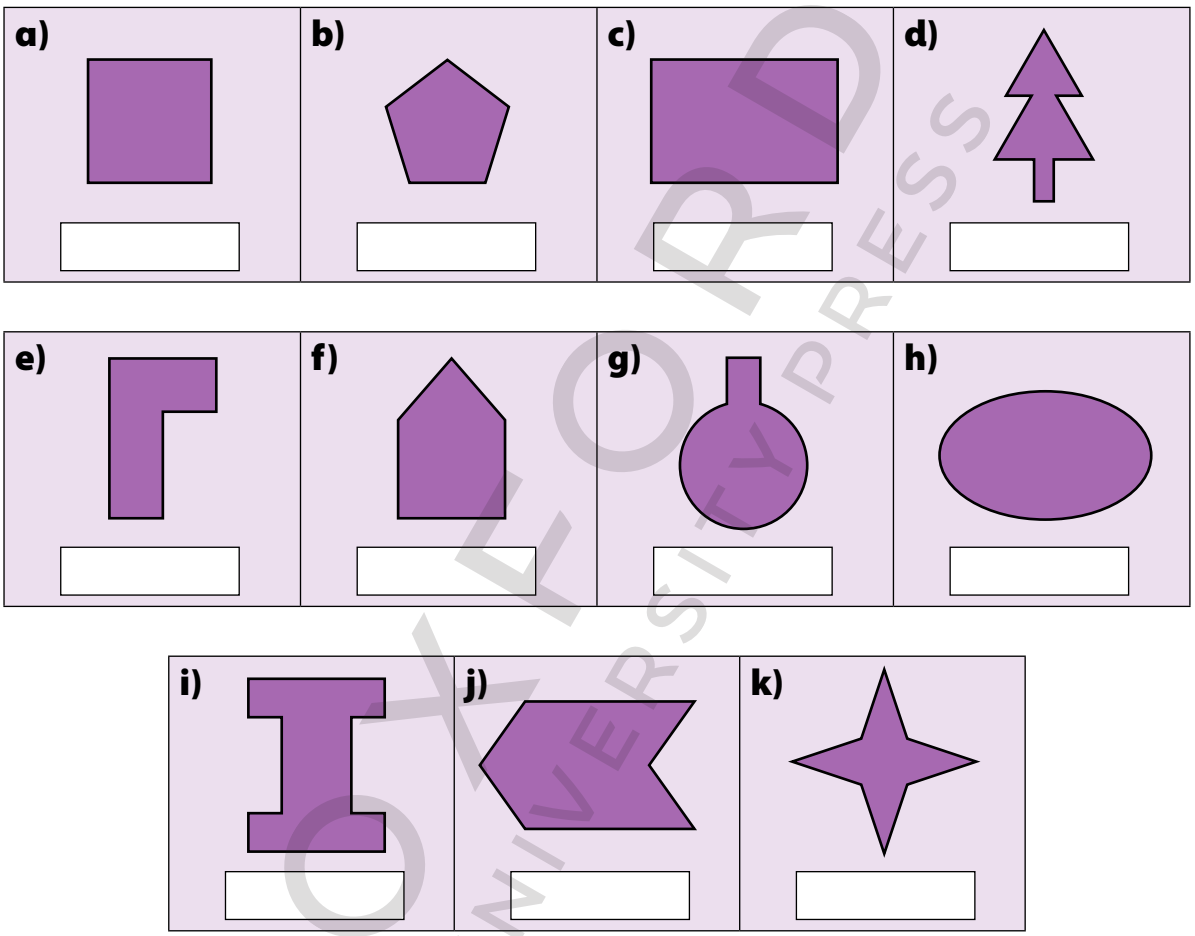
Area = ☐ cm^2 m^2

6.5 Symmetry

i. Recognize lines of symmetry in two-dimensional (2-D) shapes.

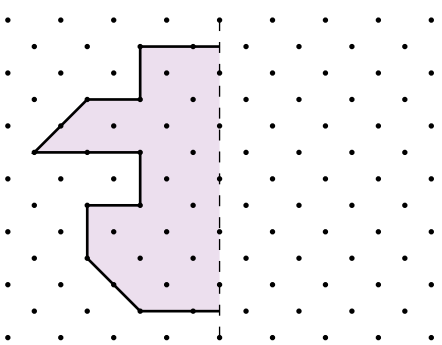
ii. Complete a symmetrical figure with respect to a given line of symmetry on square grid/ dot pattern.

1. How many lines of symmetry do the following shapes have?

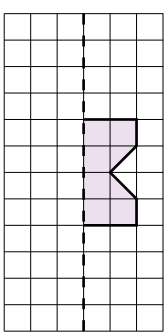


2. Complete each shape with respect to the given line of symmetry. Lines of symmetry are shown by dotted lines.

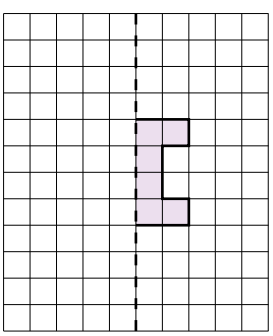
a)



b)



c)



6.6 Three Dimensional (3-D) objects

i. Compare and sort 3 D objects (cubes, cuboids, pyramids, cylinder, cone, sphere)

1. Fill in the banks using the given word bank.

cone	cylinder	circular	cube	triangular	cuboid

a) _____ and _____ have same number of edges.

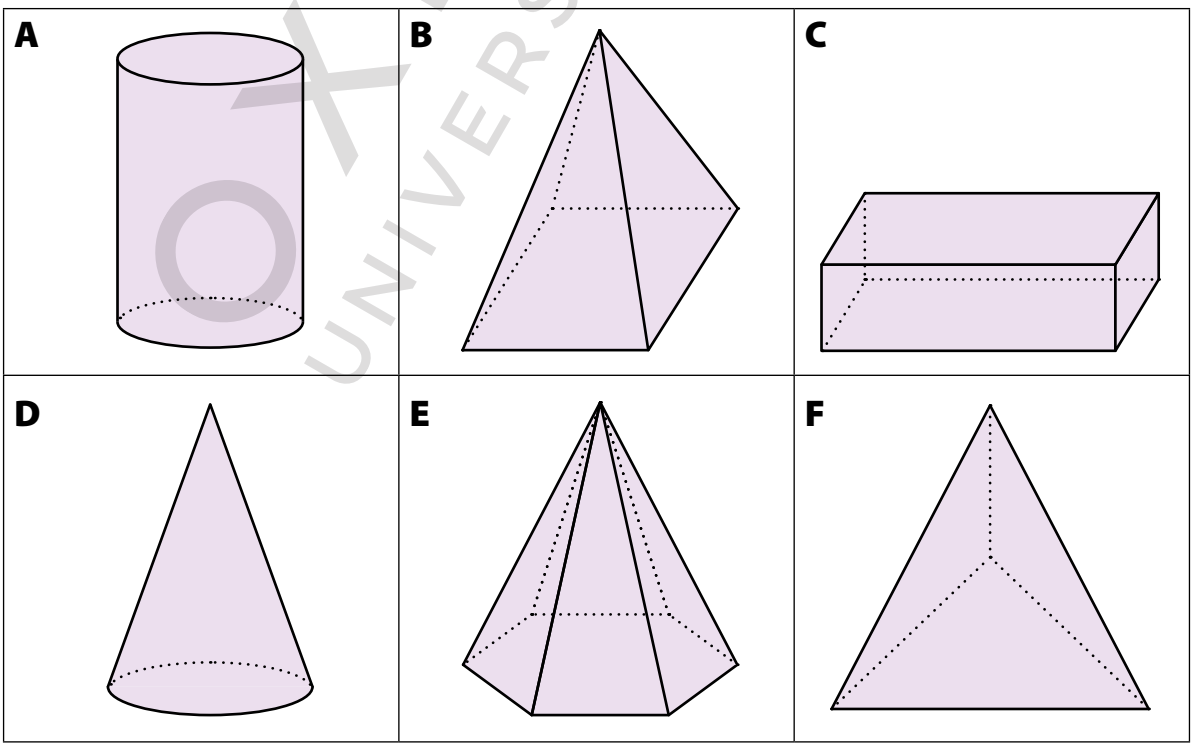
b) Pyramid with a square base has four _____ faces.

c) _____ has two circular faces.

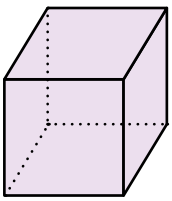
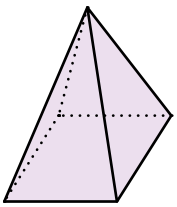
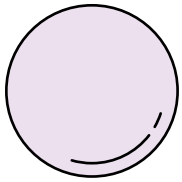
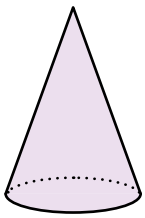
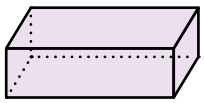
d) _____ has only one vertex.

e) Cone has only one _____ surface.

2. Put a cross on all the pyramids.



3. Solve the riddles for 3D shapes using given shapes bank.

				
cube	pyramid	sphere	cone	cuboid

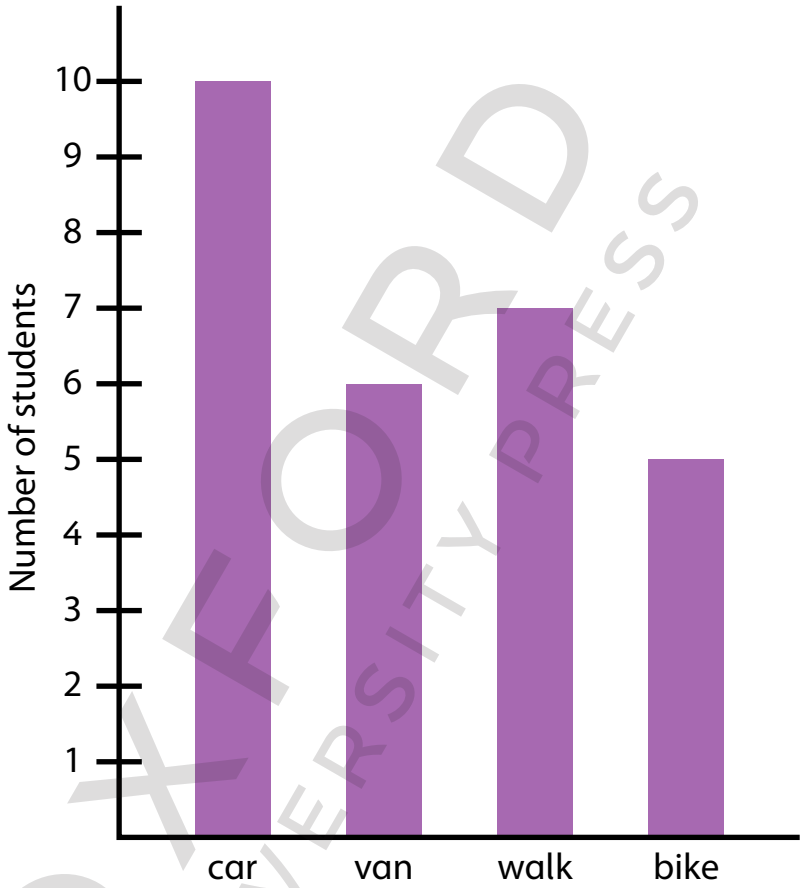
	Riddles	Who am I?
a)	I have no edges. I have no vertices. I only have a curved surface.	
b)	I have 8 vertices. I have 6 surfaces. All my faces are square in shape.	
c)	I have 8 vertices. I have 6 faces. I am not a cube. My faces can be rectangle and square in shape.	
d)	I have 5 vertices. I have 5 surfaces. 4 surfaces are triangular in shape.	
e)	I have 2 surfaces. I have one edge that is curved. I have 1 vertex.	

7.1 Bar Graph

i. Read simple bar graphs given in horizontal and vertical form.

ii. Interpret real life situations using data presented in bar graphs.

1. Class 4 of a school surveyed how they travelled to school. They showed the results using a bar graph given below.



Use the bar graph to answer the following.

a) How many children travelled to school by

i) car? ☐

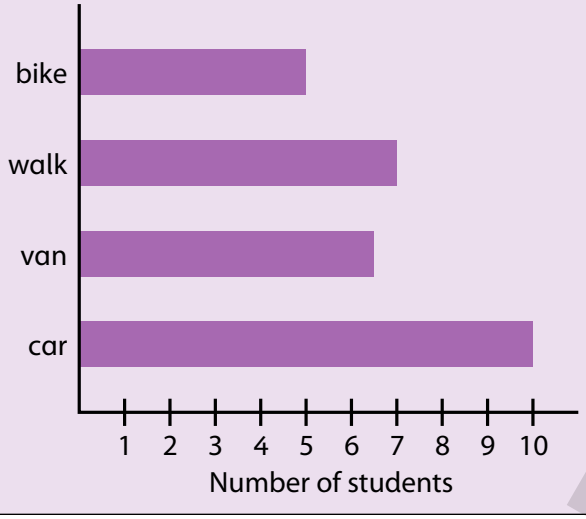
ii) van? ☐

iii) bike? ☐

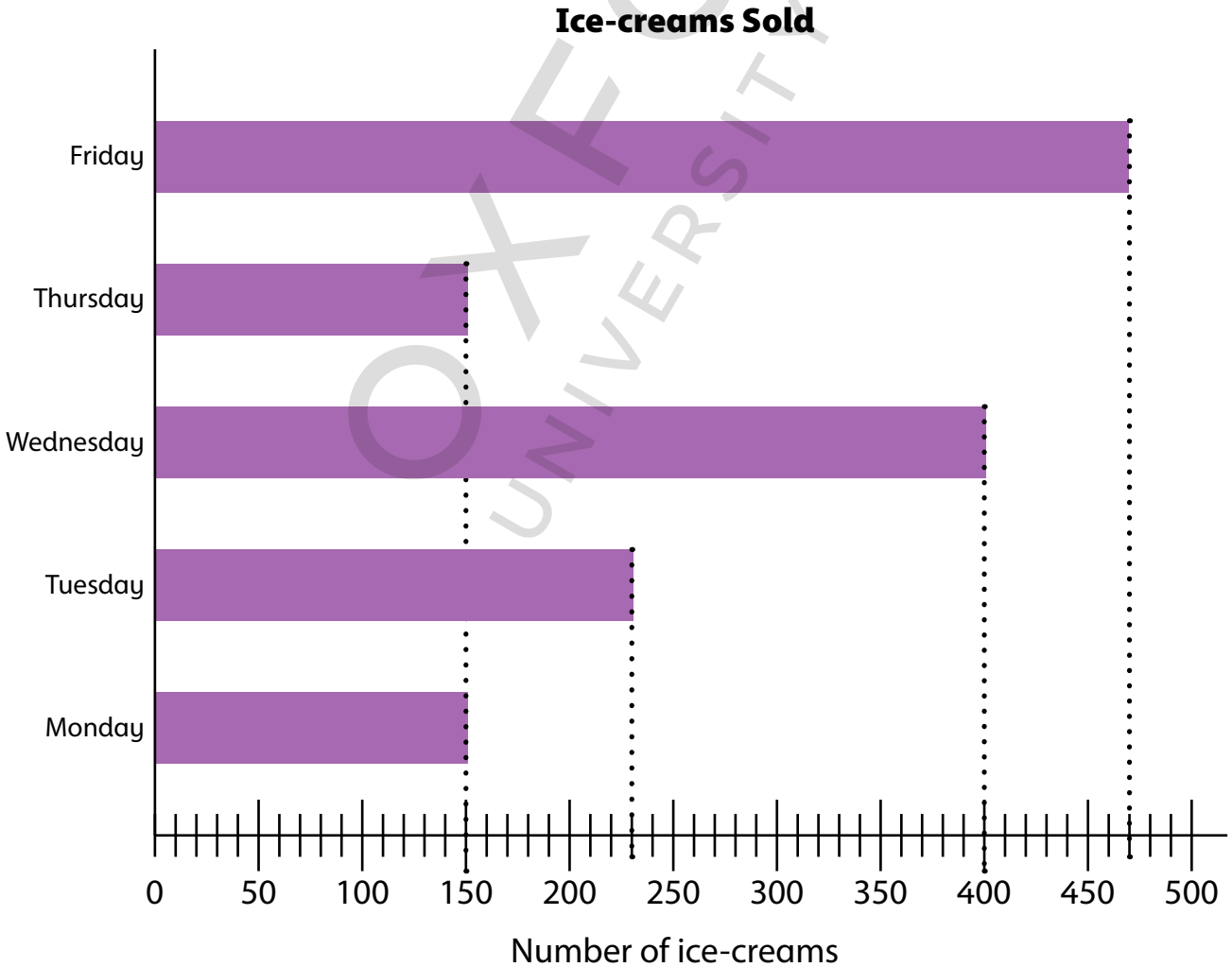
b) How many children were there in class 4? ☐

c) How many more children travelled by car than by bike? ☐

d) One of the children of class 4 represented the same results as shown below. Is there any error in his graph? What is that error?



2. Furqan works in an ice-cream shop. The bar graph shows the number of ice-creams sold over five days.



Use the bar graph to answer the questions.

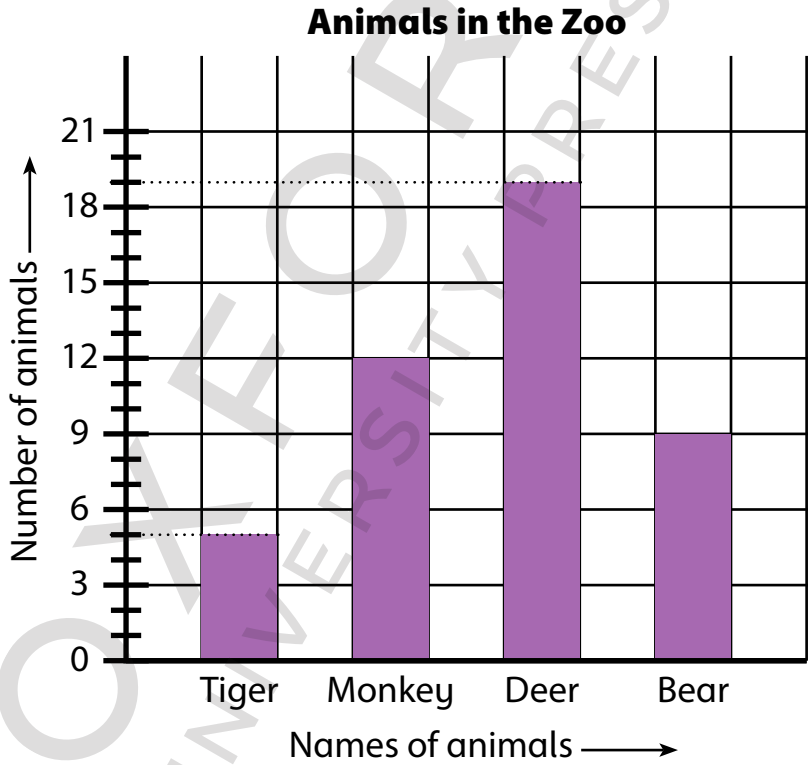
a) 400 ice-creams were sold on _____.

b) The same number of ice-creams was sold on _____ and _____.

c) How many more ice-creams were sold on Tuesday than Thursday? _____

d) Which day is the busiest in all? _____

3. Nora went to the zoo with her family. She drew a bar graph to show the number of four different types of animals that she saw.



Look at the bar graph and fill in the blanks.

a) There are _____ bears.

b) There are 12 _____.

c) There are fewer monkeys than _____.

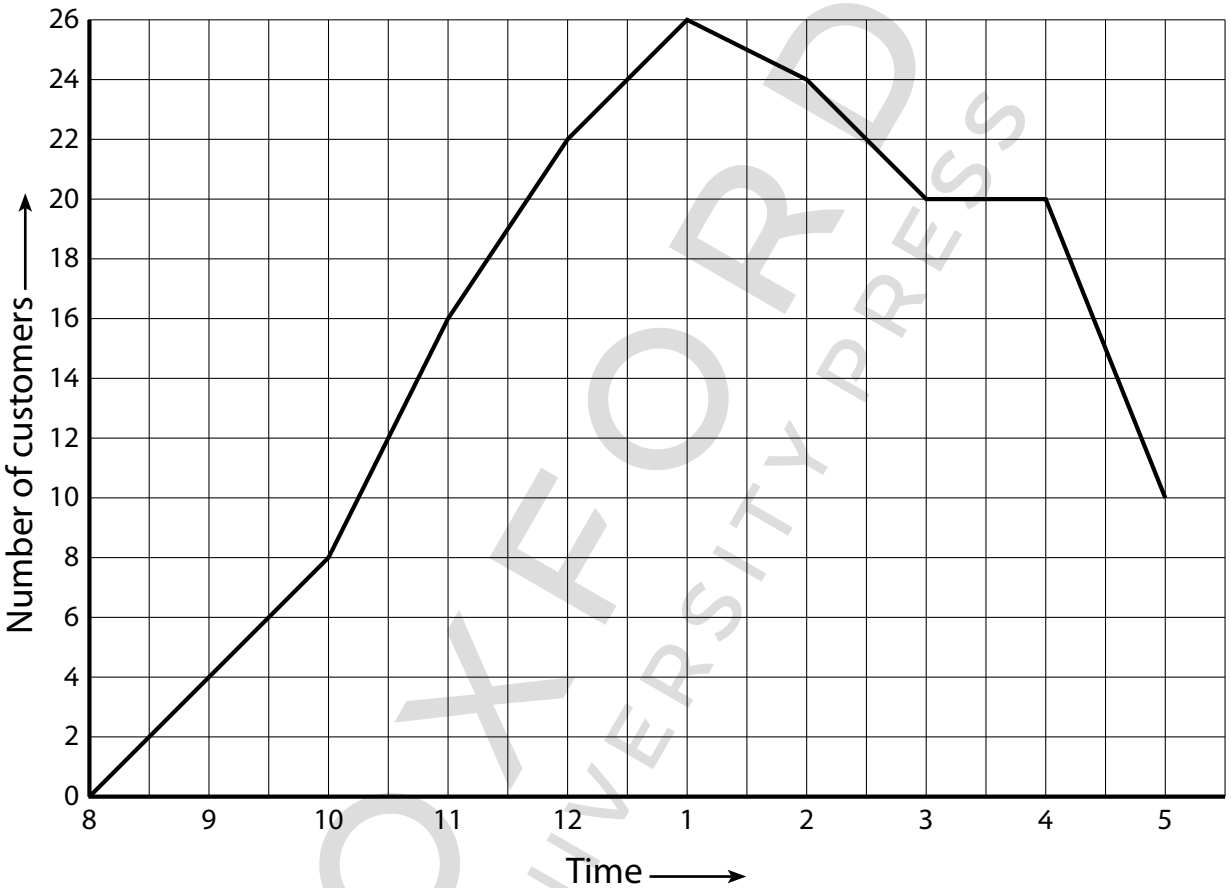
d) There are 3 more _____ than _____.

7.2 Line Graph

i. Read line graph.

ii. Interpret real life situations using data presented in line graphs.

1. Bano made a graph to represent the number of customers in her shop during the day.



Use the graph to answer the questions.

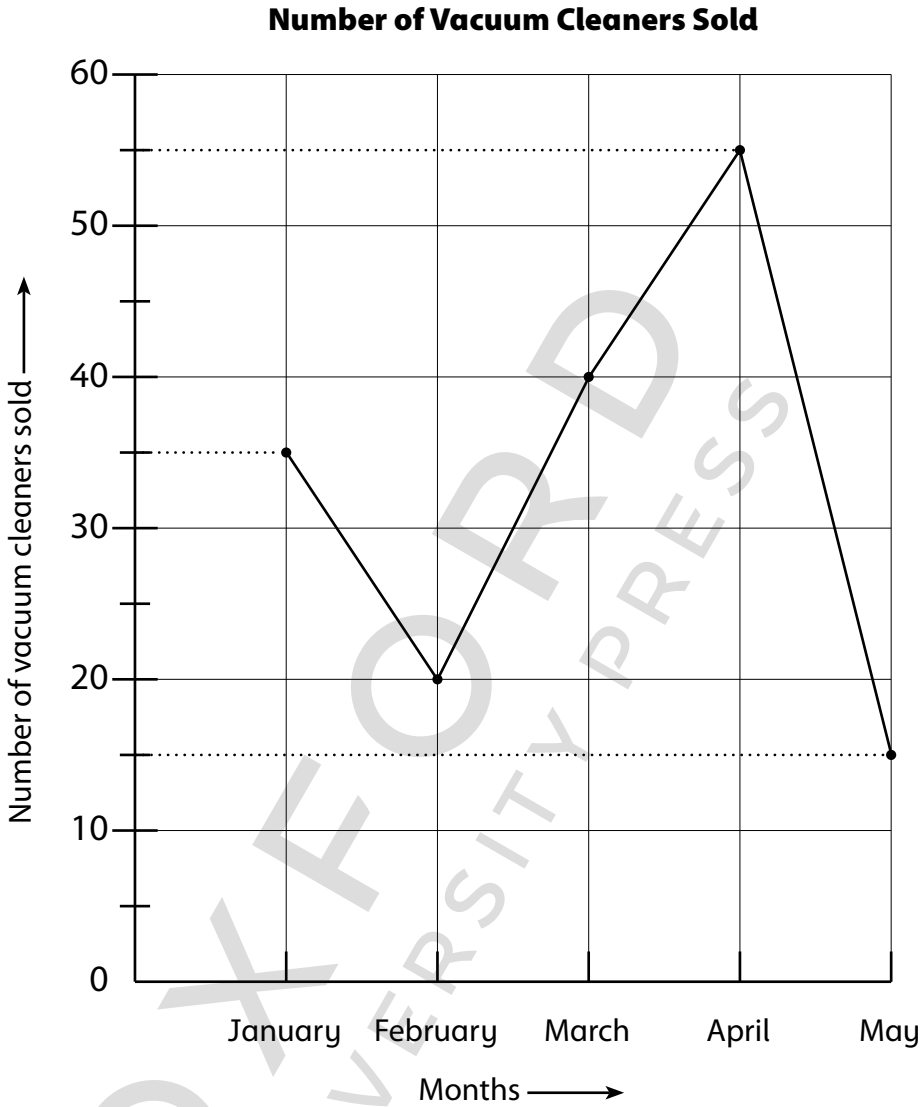
a) What was the busiest hour? _____

b) How many people were in the shop at 9 am? _____

c) Estimate the number of people in the shop at 12:30. _____

d) How many more people were in the shop at 4 pm compared to 5 pm? _____

2. The line graph shows the number of vacuum cleaners sold by an electronics store every month from January to May.



Look at the line graph and answer the questions.

a)	How many vacuum cleaners were sold in March? ☐
b)	At which month did the store sell the greatest number of vacuum cleaners? ☐
c)	How many more vacuum cleaners were sold in April than in March? ☐
d)	What is the difference in the number of vacuum cleaners sold in April and in May? ☐

7.3 Pie Chart

i. Read Pie Chart.

ii. Interpret real life situations using data presented in Pie Chart.

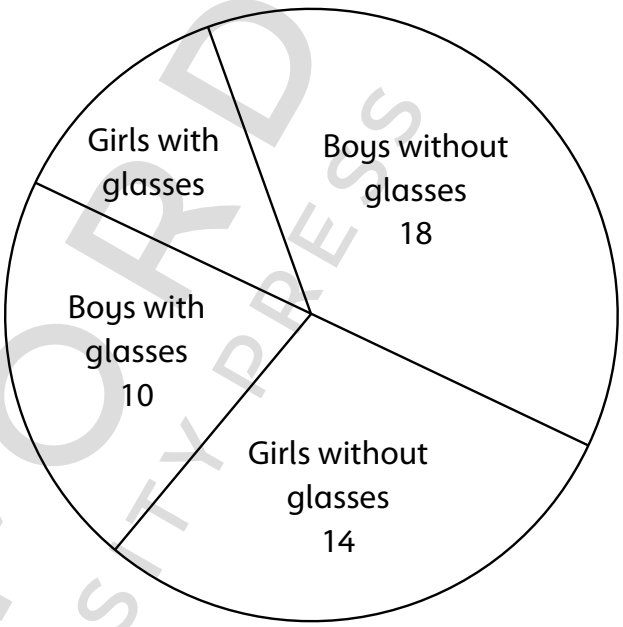
1. The pie chart shows the number of pupils with and without glasses in a class. There are 20 girls in the class.

a) How many boys are there in the class?

b) How many girls wear glasses?

c) How many pupils do not wear glasses?

d) How many pupils are there in the class?

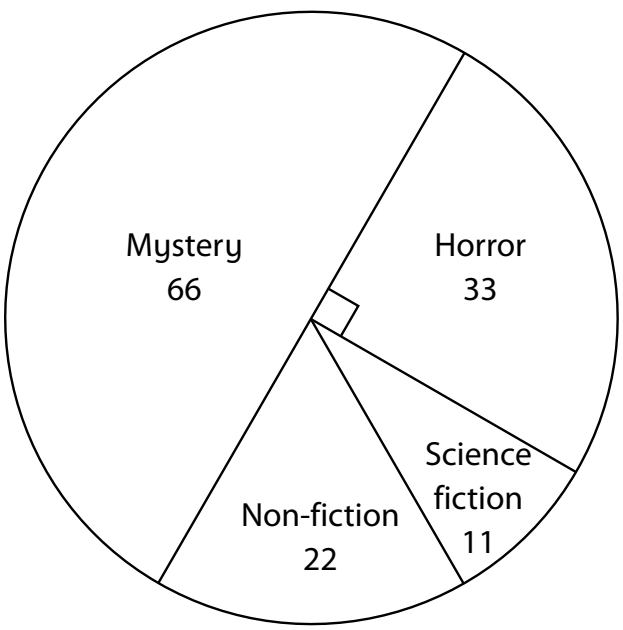


2. The pie chart shows the number of books of different genres on a book shelf. Read the pie chart and answer the following.

a) How many books are there on the shelf?

b) How many non-fiction books are there?

c) How many horror books are there on the shelf?



Notes

Notes